(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



14 OCT 2004

(43) International Publication Date 30 October 2003 (30.10.2003)

PCT

(10) International Publication Number WO 03/090292 A2

(51) International Patent Classification7:

(21) International Application Number: PCT/US03/11719

(22) International Filing Date: 15 April 2003 (15.04.2003)

(25) Filing Language:

English

H01M

(26) Publication Language:

English

(30) Priority Data:

0209227.8

20 April 2002 (20.04.2002)

(71) Applicant (for all designated States except US): ENER-SYS EUROPEAN HOLDINGS CO. [US/US]; 2366 Bernville Road, Reading, PA 19605 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KNIGHT, Roger, James [GB/GB]; No. 3 St. Lawrence Park, Chepstow, Northamptonshire NP16 6DP (GB). KEVILL, Dennis [/GB] (GB). LOYNS, Andrew, Charles [/GB] (GB). KURIAN, Raju [/GB] (GB).

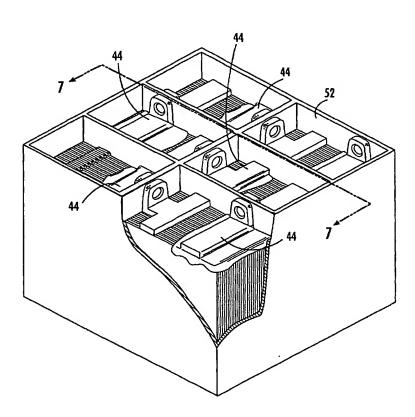
- (74) Agent: MYERS BIGEL SIBLEY & SAJOVEC, P.A.; P.O. Box 37428, Raleigh, NC 27627 (US).
- (81) Designated States (national): CN, JP, US.
- (84) Designated States (regional): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

Published:

without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: BATTERY WITH VIBRATION-RESISTANT JOINT BETWEEN POSITIVE ELECTRODE AND CURRENT CAR-RYING STRAP



(57) Abstract: Α method manufacturing a battery includes as an initial step providing a cell for a battery having alternating positive and negative electrode plates, wherein each of the electrode plates is separated by an electrically insulative separator layer. Each of the positive and negative electrode plates includes a projecting tab extending from an adjacent upper portion thereof, the projecting tabs of the positive plates being generally aligned, and the projecting tabs of the negative plates being generally aligned. Next, the method comprises attaching a conductive connecting strap to the projecting tabs of the positive and negative plates. The method then comprises applying a cap material onto the connecting positive strap and allowing the cap material to spread and drip to the exposed portions of the projecting tabs and the adjacent upper portions of the negative and positive plates and separator material. The cap material is allowed to harden to provide a cap attached to the projecting tabs and the adjacent upper portions of the positive plates and negative plates and separator material.

WO 03/090292 A2